

**LASER SOURCE COMPRISING AMPLIFIER AND
ADAPTIVE WAVEFRONT/POLARIZATION DRIVER**

ABSTRACT OF THE DISCLOSURE

A hybrid laser source including a solid state laser driven by an array of fiber laser amplifiers, the inputs of which are controllable in phase and polarization, to compensate for distortions that arise in the solid state laser, or to achieve desired output beam properties relating to direction or focus. The output beam is sampled and compared with a reference beam to obtain phase and polarization difference signals across the output beam cross section, at spatial positions corresponding with the positions of the fiber laser amplifiers providing input to the solid state laser. Therefore, phase and polarization properties of the output beam may be independently controlled by predistortion of these properties in the fiber laser amplifier inputs.